

Future Logistics Wargame: DoD AIT and RFID Policy

October 2, 2003

**Defense Logistics Agency
DOD Logistics Automatic Identification Technology Office**



Agenda

- **The AIT Suite**
- **Why RFID**
- **RFID Technologies**
- **RFID Status**
 - **Where we Are**
 - **Where we are Going**
- **The Draft Policy**
 - **RFID Support to the Warfighter**
 - **Leveraging RFID in the DoD Supply Chain**
- **The Way Ahead**
- **Future**





The AIT Suite

Linear Bar Code



2D Symbol



**OMC
Optical Memory Card**



**STS
Satellite-Tracking System**



Smart Card/CA



**CMB
Contact Memory Button**



Contact
Memory Button

**RFID - Active
Radio Frequency ID**



**RFID- Passive
Radio Frequency ID**





Why RFID?

- **Operational and Strategic Imperative**
- **Untapped Capability to Improve DoD Business Processes**
- **Insertion of Technology Applications into DoD Processes**
 - **Improve data**
 - **Use of UID in WAWF**
 - **\$\$ Savings *Enables the FLE* ation of systems**



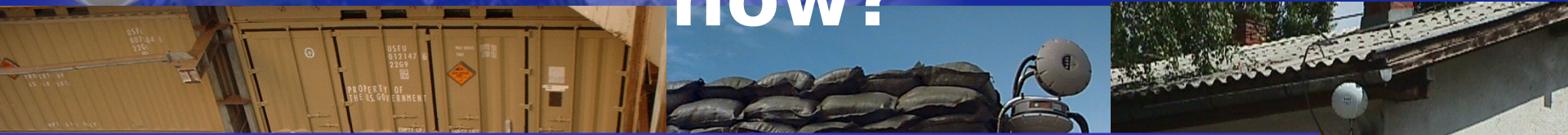
Types of RFID

- **Active RFID - Longer range**
 - Continuously powered tag
 - Low-level RF to the tag
 - High-level RF back to the reader
- **Passive RFID - Shorter range**
 - Tags reflect energy from reader
 - Tag receives/stores energy to respond
 - Needs stronger RF signal from reader
 - Low RF strength from tag
- **Semi-Passive RFID**
 - Similar to passive
 - Internal power (battery) for tag circuitry
 - Other functions; may extend range

How Far - How Fast - How Many - How Much



RFID in DoD - Where are we now?



DOD operates the largest end to end active RFID system in the world



30+ Countries and over 850 sites world-wide



DoD RFID Policy- Where are We Going?

■ Support Warfighter requirements . . .

Expand active RFID beyond “Islands of Capability” for ITV

■ Optimize the Supply Chain . . .

In **Leverage complete range of RFID**
W **technology**
to improve business processes!



RFID - Support Warfighter Requirements

- **Immediately implement active RFID in support of Combatant Commander ITV requirements**
 - **Put RFID tags on:**
 - Consolidated sustainment/ammunition containers and air pallets
 - Unit movement equipment
 - Prepositioned materiel and supplies
 - Send RFID tag data to ITV servers IAW data timeliness guidelines
 - Establish RFID infrastructure to support core business processes
 - Program and budget (O&M or DWCF/TWCF) for RFID operations

- **Enhance Asset Visibility, even in austere environments**
 - **Reduce Logistics Footprint**
 - **Hands-Off Data Capture**
 - **Improve Force Tracking**
 - **Optimize**

**Supports
COCOM
Directive
Authority
For Logistics**



RFID - Optimize the Supply Chain

- **DOD will be an early adopter of passive RFID technology**
 - **Partner with industry - Leverage the Auto-ID effort**
 - **Conduct initial operational RFID projects at case/pallet level and on selected high value items**
 - **Implement passive RFID technology at selected sites and with selected suppliers by Jan 05**
 - **Program and budget for total implementation in order to take maximum advantage of technology (DOM 06-10)**

- **Hands-Off Data Capture**
- **Improve Data Accuracy**
 - **Improve Logistics Processing Time**
 - **Improve Manpower Utilization**

Reduced Total Ownership Costs



Enabling Inventory Management and Distribution

- Vendor assembly
- *Meal Ready-to-Eat (MRE)*
- *Unitized Group Ration (UGR)*
 - -UGR Heat & Serve
 - -UGR A (frozen/fresh)
- *Other (UHT milk, pouch bread, etc.)*
- Depots
- Domestic/international shipments
- Prepositioned war reserve (land/sea)
- General Support/Direct Support Support
- Warfighter



• Improves visibility for the last tactical mile

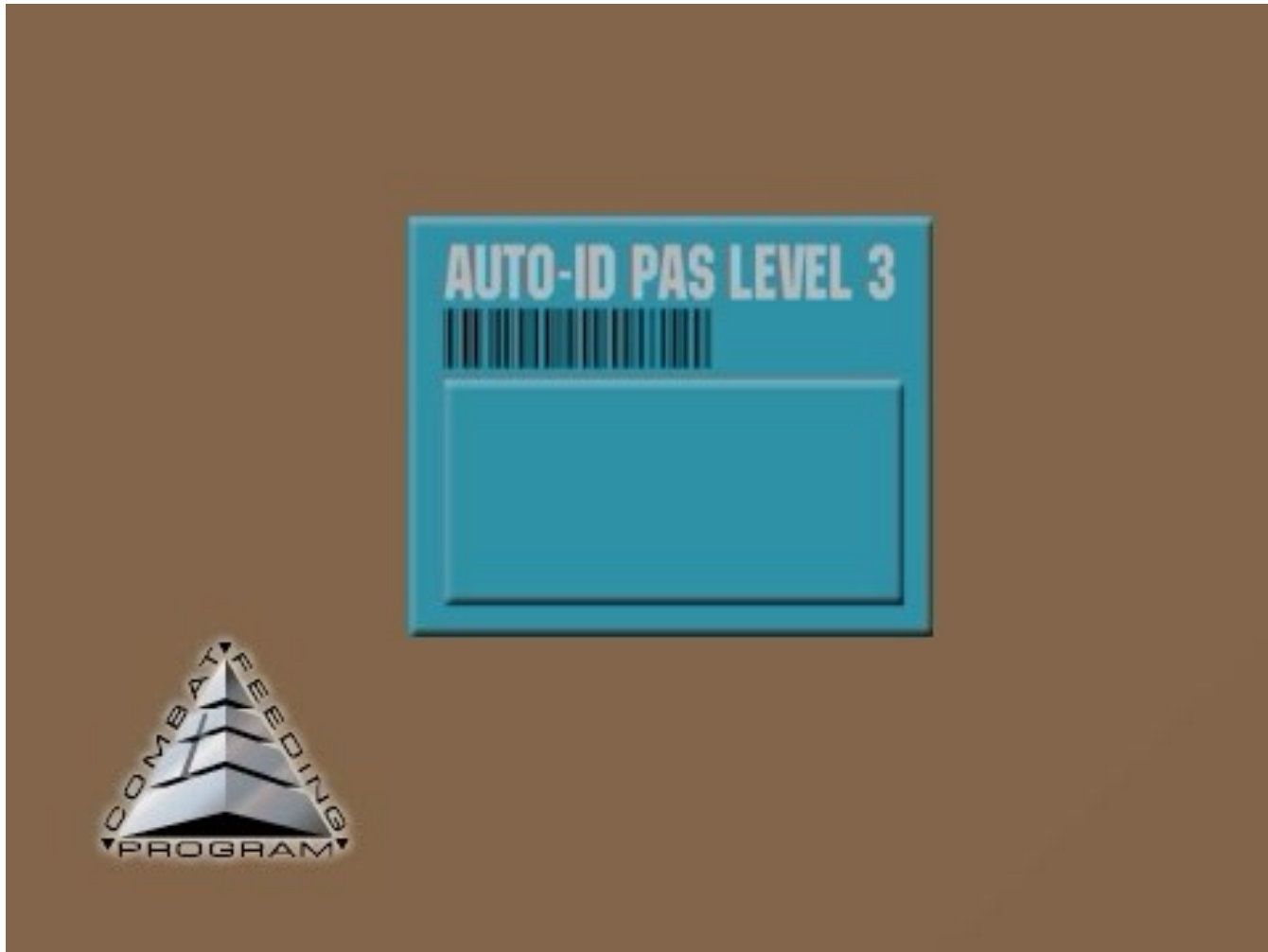
• Hands-Off Data Capture

• Improve Data Accuracy

• Improve Logistics



The Process





DoD RFID - The Way Ahead

- **Form IPT & Work Groups - Aug/Oct 03**
 - **Implementation & Project Oversight**
 - **Business Processes**
 - **Technical**
- **Conduct DoD RFID Kickoff - Oct 03**
- **Conduct Initial Implementation Projects - Jan 04-May 04**
- **Convene DoD & Industry RFID Forum - Feb 04**
- **Include FY06 POM “wedge” to support RFID - Mar 04**
- **Publish Final RFID Policy - Jul 04**
- **Implementation & Migration - Key Suppliers Jan 05**
 - **Require passive RFID at the case/pallet level**
- **Integrate into DoD Supply Chain - Continuous**



DoD RFID - The Future

- **ALL Materiel RFID/Network Enabled**
- **All Materiel RFID has:**
 - Sophisticated Sensors**
 - IP address**
 - Two way communications**
- **Therefore all items know their:**
 - Condition**
 - Location**
 - Serial Number/Part Number/Mfg...**

UID!

Real Visibility for the Last Tactical Mile

ASSET VISIBILITY FOR THE LAST TACTICAL MILE

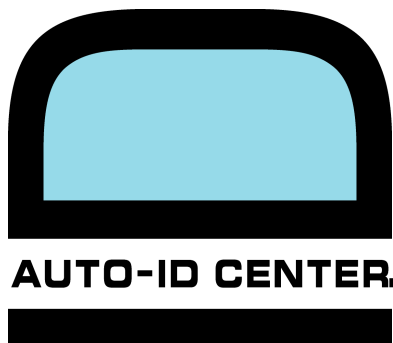
“Where’s Waldo’s Fuel Control Valve?”

GET ON WITH IT!





Tools for Success - Auto-ID Center



- Founded at MIT in Oct 99 - SAP is founding software sponsor
- 100+ members - new centers in England, Switzerland, Australia, China & Japan
- Becoming the largest, most successful standards consortium
- Early collaboration of retailers and suppliers will reduce investment risk & adoption challenges
- Main initiatives: 5¢ Tag, EPC - Electronic Product Code, PML - Physical Markup Language, ONS - Object Naming Service

The EPC

0112. 0000A89SFR. 3300016666F.
000169DC0FRTR

Header	EPC Manager	Object Class	Serial Number
0-7 bits	8-35 bits	36-59 bits	60-95 bits
256M manufacturers		SKU or NSN	Unique Object ID num



Global benefits of an integrated Smart Item network estimated to be over **U.S. \$240 billion** annually.

Procter & Gamble

METRO AG

TESCO

TARGET CORPORATION

Philip Morris
Companies Inc.



WALMART®

Johnson & Johnson



Uniform Code Council, Inc.®
THE GLOBAL LANGUAGE OF BUSINESS®



SIEMENS

Over **550 billion** different items pass through the members' supply chains every year.